Federal Aviation Administration

Surface Safety Portfolio

Surface Awareness Initiative (SAI)

Background

A safe and efficient National Airspace System (NAS) begins and ends on the airport surface. Separation services that are provided by Air Traffic Controllers (ATC) in the sky, are also paramount on runways, taxiways, and other airport surface movement areas. Giving ATC the tools for necessary to improve their situational awareness on the surface is key for the future of surface safety. The Surface Awareness Initiative (SAI) will deliver innovative, cost-effective technological solutions to airports without existing surface surveillance capabilities to expand ATC's surface situational awareness.

SAI solutions will leverage Automatic Dependent Surveillance – Broadcast (ADS-B) as a primary source of aircraft position both on the surface and in airport arrival and departure corridors. These 'targets' will be displayed overtop an airport surface map that will at a minimum depict runways, taxiways, hold ramps, and other movement areas. In addition to aircraft targets, any vehicles that are equipped with ADS-B out capabilities will also be displayed on the map.

Current State of SAI

The FAA is pursuing implementation of SAI with the greatest sense of urgency. From all lines of business within the agency and at all levels within the organization, getting SAI solutions deployed is of highest priorities. Following up from the Surface Safety Symposium and Surface Safety Industry Day earlier in 2023, a formal Request For Information (RFI) was provided to industry where 20 partners in industry provided responses. Based on this feedback the FAA intends to pursue a formal acquisition of solutions by releasing a Screening Information Request (SIR) in November 2023 to solicit proposals from industry where select solutions will be placed on a Qualified Product List (QPL). From the QPL, capabilities can be selected for deployment based on the operational uniqueness of a given airport location.

What's Next

Currently, the SAI team is developing a Minimum Performance Requirements document that will define the basic functionality required for a SAI solution. Additionally, the team is working to develop an Operational Capability Demonstration (ODC) plan to ensure the solutions proposed by industry meet requirements and needs to ATC to improve their surface situational awareness. The team's objective is to have a solution deployed to select airports starting in June 2024.

Summation

FAA is dedicated to continually evaluating and improving upon safety. With SAI, ATC will have another tool in their tool box to enhance their surface situational awareness. SAI is not the final and only endeavor the FAA is pursuing to address such a critical operational need, it along with the Airport Runway Verification Tool, and the Runway Incursion Device, are a few examples of the FAA's commitment to always advancing the safety of the NAS.